#### **JOURNAL PAPERS**

Colson, W.B., "Short-Wavelength Free Electron Lasers in 1997," *Nuclear Instruments and Methods in Physics Research*, A407, pp. 26-29, 1998.

Denardo, Bruce, "Nonanalytic Nonlinear Oscillations: Christiaan Huygens, Quadratic Schrödinger Equations, and Solitary Waves," *Journal of the Acoustical Society of America*, Vol. 104, pp. 1289-1300, 1998.

Kesselring, M., Colson, W.B., Wong, R., and Sheffield, R.L., "Simulations of the LANL Regenerative Amplifier FEL," *Nuclear Instruments and Methods in Physics Research*, A407, II-23, 1998.

Larraza, Andrés and Denardo, Bruce, "An Acoustic Casimir Effect," Physics Letters A, Vol. 248, pp. 151-155, 1998.

Larraza, Andrés, Holmes, Christopher D., Susbilla, Robert T., and Denardo, Bruce, "The Force Between Two Parallel Rigid Plates Due to the Radiation Pressure of Broadband Noise: An Acoustic Casimir Effect," *Journal of the Acoustical Society of America*, Vol. 103, pp. 2267-2272, 1998.

Larraza, A., Holmes, C.D., Susbilla, R.T., and Denardo, B., "An Acoustic Casimir Effect," *Journal of the Acoustical Society of America*, Vol. 103, No. 5, Pt 2, p. 2763, 1998.

Larraza, Andrés, Holmes, Christopher D., Susbilla, Robert T., and Denardo, Bruce, "An Acoustic Casimir Effect," *Journal of the Acoustical Society of America*, Vol. 103, No. 5, Pt. 2, p. 2763, 1998.

Luban, M. and Luscombe, J.H., "Dynamical Localization of Electrons in Aperiodic Superlattices," *Physical Review B*, Vol. 57, No. 15, pp. 9043-9049, 1998.

Luban, M., Jang, Z., and Luscombe, J.H., "Proton Spin-Lattice Relaxation Rate for Magnetic Molecular Ring Clusters," *Bulletin of the American Physical Society*, Vol. 43, p. 218, 1998.

Luscombe, J.H. and Luban, M., "Classical Heisenberg Model of Magnetic Molecular Ring Clusters: Accurate Approximants for Correlation Functions and Susceptibility," *Journal of Chemical Physics*, Vol. 108, No. 17, pp. 7266-7273, 1998.

Luscombe, J.H. and Luban, M., "Simplified Recursive Algorithm for Wigner 3*j*- and 6*j*-Symbols," *Physical Review E*, Vol. 57, No. 6, pp. 7274-7277, 1998.

Luscombe, J.H., Luban, M., and Reynolds, J.P., "Variational Tight-Binding Theory of Excitons in Compositionally Modified Semiconductor Superlattices," *Bulletin of the American Physical Society*, Vol. 43, p. 232, 1998.

Nguyen, R.T., Colson, W.B., Wong, R., and Sheffield, R.L., "Simulations of a Regenerative MW FEL Amplifier," *Nuclear Instruments and Methods in Physics Research*, A407, II-3, 1998.

O'Neal, Daniel M. and Baker, Steven R., "Results of Underwater Ambient Noise Measurements in Three Large Tank Exhibits at the Monterey Bay Aquarium," *Journal of the Acoustical Society of America*, Vol. 103, p. 2908, 1998.

Prather, Wayne E., Denardo, Bruce, and Raspet, Richard, "Parametric Excitation of a Helmholtz Resonator," *Journal of the Acoustical Society of America*, Vol. 103, No. 5, Pt. 2, p. 2765, 1998.

Simmons, T., Denardo, B., Larraza, A., and Keolian, R., "An Acoustic Radiometer," *Journal of the Acoustical Society of America*, Vol. 103, No. 5, Pt 2, p. 2763, 1998.

Smith, K.B., "Three-Dimensional Propagation Effects: Modeling, Observations, and Suggested Benchmark Cases," *Journal of the Acoustical Society of America*, Vol. 103, p. 2989, 1998.

Spiel, D.E., "On the Births of Film Drops From Bubbles Bursting on Seawater Surfaces," *Journal of Geophysical Research*, Vol. 103, pp.24907-24918, 1998.

#### **CONFERENCE PAPERS**

Larraza, A., Holmes, C.D., Susbilla, R.T., and Denardo, B., "An Acoustic Casimir Effect," *Proceedings of the 16<sup>th</sup> International Conference on Acoustics*, Vol 1, Patricia K. Kuhl and Lawrence A. Crum, (eds), pp. 131-132, 1998.

O'Neal, Daniel M. and Baker, Steven R., "Results of Underwater Ambient Noise Measurements in Three Large Tank Exhibits at the Monterey Bay Aquarium," *Proceedings of the 16th International Congress on Acoustics and the 135th Meeting of the Acoustical Society of America*, Vol. II, pp. 1411-1412, 1998.

Simmons, T., Denardo, B., Larraza, A., and Keolian, R., "Acoustic Radiometer Demonstration," *Proceedings of the 16<sup>th</sup> International Conference on Acoustics*, Vol. 1, Patricia K. Kuhl and Lawrence A. Crum, (eds.), pp. 129-130, 1998.

Smith, K.B., Rojas, J.G., Miller, J.H., and Potty, G., "Geoacoustic Inversions in Shallow Water Using Direct Methods and Genetic Algorithm Techniques," *Proceedings of Pacific Ocean Remote Sensing Conference* '98, pp. 703-707, Qingdao, China, 28-31 July 1998.

Smith, K.B., Brune, J., and Chiu, C.-S., "Passive Transient Localization Using Signal Autocorrelation Matching," *Proceedings of 4th European Conference on Underwater Acoustics*, pp. 9-14, 21-25 September 1998.

Walker, P., "Aerosol Contribution to Marine Atmospheric Surface Layer Refractivity," *Proceedings of the 1997 Battlespace Atmospheric Conference*, Technical Document 2989, March 1998.

Walker, P.L., "Aerosol Influences on Marine Atmospheric Surface Layer Optics," *Proceedings of the SPIE, Propagation and Imaging Through the Atmosphere II*, Volume 3433, San Diego, CA, 22-23 July 1998.

### **CONFERENCE PRESENTATIONS**

Colson, W.B., "Short-Wavelength Free Electron Lasers in 1997," poster presentation, Twentieth International Free Electron Laser Conference, Williamsburg, VA, August 1998.

Larraza, Andrés, "Some Acoustic Analogs to Electromagnetic Zero Point Field Effects: Static and Dynamic Casimir Effects," Advanced ICFA Beam Dynamics Workshop on Quantum Aspects of Beam Physics, Monterey, CA, 4-9 January 1998.

Larraza, Andrés, "Some Acoustic Analogs to Electromagnetic Zero Point Field Effects: Static and Dynamic Casimir Effects," Advanced ICFA Beam Dynamics Workshop on Quantum Aspects of Beam Physics, Monterey, CA, 4-9 January 1998.

LeGear, R.E., Steele, R.B., McGinnis, R.D., and Colson, W.B., "Simulations of the Proposed TJNAF 20 kW Free Electron Lasers," poster presentation at the Twentieth International Free Electron Laser Conference, Williamsburg, VA, August 1998.

Larraza, Andrés, Holmes, Christopher D., Susbilla, Robert T., and Denardo, Bruce, "An Acoustic Casimir Effect," Acoustical Society of America, Seattle, WA, 20-26 June 1998.

Larraza, A., "Some Acoustic Analogs to Electromagnetic Zero Point Field Effects: Static and Dynamic Casimir Effects," Advanced ICFA Beam Dynamics Workshop on Quantum Aspects of Beam Physics, Monterey, CA, 4-9 January 1998.

Luban, M., Jang, Z., and Luscombe, J.H., "Proton Spin-Lattice Relaxation Rate for Magnetic Molecular Ring Clusters," Meeting of the American Physical Society, Los Angeles, CA, 16-20 March 1998.

Luscombe, J.H., Luban, M. and Reynolds, J.P., "Variational Tight-Binding Theory of Excitons in Compositionally Modified Semiconductor Superlattices," Meeting of the American Physical Society, Los Angeles, CA, 16-20 March 1998.

O'Neal, Daniel M. and Baker, Steven R., "Results of Underwater Ambient Noise Measurements in Three Large Tank Exhibits at the Monterey Bay Aquarium," Joint Meeting of the International Congress of Acoustics and the Acoustical Society of America, Seattle, WA 20-26 June 1998.

Prather, Wayne E., Denardo, Bruce, and Raspet, Richard, "Parametric Excitation of a Helmholtz Resonator," Acoustical Society of America, Seattle, WA, 20-26 June 1998.

Simmons, Timothy G., Denardo, Bruce, Larraza, Andrés, and Keolian, Robert, "An Acoustic Radiometer," Acoustical Society of America, Seattle, WA, 20-26 June 1998.

Smith, K.B., Rojas, J.G., Miller, J.H., and Potty, G., "Geoacoustic Inversions in Shallow Water Using Direct Methods and Genetic Algorithm Techniques," Pacific Ocean Remote Sensing Conference '98, Qingdao, China, 28-31 July 1998.

Smith, K.B., "Three-Dimensional Propagation Effects: Modeling, Observations, and Suggested Benchmark Cases," Acoustical Society of America, Seattle, WA, 20-26 June 1998.

Smith, K.B., Rojas, J.G., Miller, J.H., and Potty, G., "Geoacoustic Inversions in Shallow Water Using Direct Methods and Genetic Algorithm Techniques," Pacific Ocean Remote Sensing Conference '98, Qingdao, China, 28-31 July 1998.

Smith, K.B., "Three-Dimensional Propagation Effects: Modeling, Observations, and Suggested Benchmark Cases," Acoustical Society of America, Seattle, WA, 20-26 June 1998.

Smith, K.B., Brune, J., and Chiu, C.-S., "Passive Transient Localization Using Signal Autocorrelation Matching," 4th European Conference on Underwater Acoustics, Rome, Italy, 21-25 September 1998.

Walker, P.L., "Aerosol Influences on Marine Atmospheric Surface Layer Optics," SPIE, Propagation and Imaging Through the Atmosphere II, San Diego, CA. 22-23 July 1998.

Walters, D.L. and Miller, D.K., "Preliminary Assessment of Mesoscale Models to Optical Turbulence Predictions," March 1998, Naval Postgraduate School SCIF.

Walters, D.L. and Miller, D.K., "Adaptation of Mesoscale Models to Optical Turbulence Predictions," October 1998, Naval Postgraduate School SCIF.

#### **TECHNICAL REPORTS**

Scandrett, C.L. and Baker, S.R., "T-Matrix Approach to Array Modeling, Naval Postgraduate School Technical Report, NPS-UW-98-001, October 1998.

PAIENIS
Robinson, Kem E., Gottschalk, Stephen C., Quimby, David C., and Colson, William B., Patent Application Number 08 855,731: "Optical Mode Tapered Undulator and Method for Producing the Same."